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Technical Bulletins: EPA Policy on Land Treatment of Municipal Wastewater

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Municipal Technical Advisory Service
Institute for Public Service, The University of Tennessee
In cooperation with the Tennessee Municipal League

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ERA POLICY ON LAND TREATMENT OF MUNICIPAL WASTEWATER

The following is excerpted from a memorandum of Oct. 3, 1977, on the above subject, from the EPA Administrator to Assistant Administrators and Regional Administrators (Regions I-X):

Land treatment systems involve the use of plants and the soil to remove previously unwanted contaminants from wastewaters. Land treatment is capable of achieving removal levels comparable to the best available advanced wastewater treatment technologies while achieving additional benefits. The recovery and beneficial reuse of wastewater and its nutrient resources through crop production, as well as wastewater treatment and reclamation, allow land treatment systems to accomplish far more than most conventional treatment and discharge alternatives.

The application of wastewater on land is a practice that has been used for many decades; however, recycling and reclaiming wastewater that may involve the planned recovery of nutrient resources as part of a designed wastewater treatment facility is a relatively new technique. One of the first such projects was the large scale Muskegon, Michigan, land treatment demonstration project funded under the Federal Water Pollution Control Act Amendments of 1966 (P.L. 84-660), which began operations in May 1974.

Reliable wastewater treatment processes that utilize land treatment concepts to recycle resources through agriculture, silviculture, and aquaculture practices are available. The technology for planning, designing, constructing and operating land treatment facilities is adequate to meet both 1983 and 1985 requirements and goals of P.L. 92-500.

Because land treatment processes contribute to the reclamation and recycling requirements of P.L. 92-500, they should be preferentially considered as an alternative wastewater management technology. Such consideration is particularly critical for smaller communities. While it is recognized that acceptance is not universal, the utilization of land treatment systems has the potential for saving billions of dollars. This will benefit not only the nationwide water pollution control program, but will also provide an additional mechanism for the recovery and recycling of wastewater as a resource.

EPA currently requires each applicant for construction grant funds to make a conscientious analysis of wastewater management alternatives with the burden upon the applicant to examine all available alternative technologies. Therefore, if a method that encourages water conservation, wastewater reclamation and reuse is not recommended, the applicant should be required to provide complete justification for the rejection of land treatment.

Imposition of stringent wastewater treatment requirements prior to land application has quite often nullified the cost-effectiveness of land treatment processes in the past. We must ensure that appropriate federal, state and local requirements and regulations are imposed at the proper point in the treatment system and are not used in a manner that may arbitrarily block land treatment projects. Whenever states insist upon placing unnecessarily stringent preapplication treatment requirements upon land treatment, such as requiring EPA secondary effluent quality in all cases prior to application on the land, the unnecessary wastewater treatment facilities will not be funded by EPA. This should encourage the states to re-examine and revise their criteria, and so reduce the cost burden, especially to small communities, for construction and operation of unnecessary or too costly facilities. The reduction of potentially toxic metals and organics in industrial discharges to municipal systems often is critical to the success of land treatment. The development and enforcement at the local level of pretreatment standards that are consistent with national pretreatment standards should be required as an integral part of any consideration or final selection of land treatment alternatives. In addition, land treatment alternatives must be fully coordinated with on-going areawide planning under section 208 of the Act. Section 208 agencies should be involved in the review and development of land treatment options.

Research will be continued to further improve criteria for preapplication treatment and other aspects of land treatment processes. This will add to our knowledge and reduce uncertainties about health and environmental factors. I am confident, however, that land treatment of municipal wastewaters can be accomplished without adverse effects on human health if proper consideration is given to design and management of the system.

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